

Appl. No. 10/817,342
Amdt. dated October 19, 2005
Reply to Office action of August 3, 2005

REMARKS

Reconsideration of this application is respectfully requested.

The Action objected to the abstract because it included the word, "comprising." A new abstract is provided. Withdrawal of the objection to the specification is respectfully requested.

Claims 1, 2, 3, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Qi (U.S. Patent No. 6,841,941), and claims 4-9 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over Qi in view of Luongo (U.S. Patent No. 6,391,958). Withdrawal of the rejections is respectfully requested in view of the following remarks.

Claim 1 requires:

- (a) molding a shiplap edge in a first duct board ..., the molded shiplap edge having a molded edge thickness; and
- (b) machining the molded shiplap edge to a desired machined edge thickness that is less than the molded edge thickness.

The Action admits on page 3 that, "The primary reference to Qi was discussed above. ... [T]he Examiner was unable to find express teachings of the notoriously well known step (in the instant art) of grinding its product during it [sic] patented process."

Thus, the Patent and Trademark Office has admitted that Qi does not disclose the claimed step of, "machining the molded shiplap edge to a desired machined edge thickness that is less than the molded edge thickness". By the Patent and Trademark Office's own admission, the rejection of claims 1, 2, 3, and 10 as being anticipated was improper and must be withdrawn. M.P.E.P. § 2131 recites:

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

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The Action admits that there is no express teaching of the missing feature in Qi, and employing the M.P.E.P.'s requirements, there is no inherent disclosure in Qi, either:
M.P.E.P. § 2112(IV) recites:

To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)

Because a molded substrate as described in Qi can be made without machining, machining is not necessarily present, and Qi does not inherently teach machining. In this case, by the Patent and Trademark Office's admission, Qi does not disclose every element of claims 1, 2, 3 and 10, and thus cannot anticipate these claims. Withdrawal of the rejection of claims 1, 2, 3 and 10 under § 102 is respectfully requested.

Claims 4-9 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over Qi in view of Luongo (US 6,391,958). As noted above with respect to claims 1, 2, 3 and 10, Qi fails to disclose or suggest "machining the molded shiplap edge to a desired machined edge thickness that is less than the molded edge thickness." Contrary to the allegations in the office action, Luongo fails to cure the deficiencies of Qi with respect to this feature.

The Action alleges that it is notoriously well known to grind a duct board product. Even if that were true, there is no allegation that it is well known to machine a molded shiplap edge. The Action cites Luongo for teaching grinding of a duct board product during its production. However, Luongo neither discloses nor suggests machining a duct board product. Luongo only teaches grinding a gypsum ore. The only mention of duct in Luongo relates to supplying air for the wallboard production process through a duct (col. 17, lines 1-8; and col. 20, lines 34-63; and col. 22, lines 12-15 and 58-67). A keyword search shows that the phrase "duct board" never appears at all in Luongo. There is no mention or suggestion whatsoever in Luongo of a process for fabricating a duct board. Thus, the statement of facts in the Action is incorrect.

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The Action alleges that col. 7, lines 20-24 teach that grinding would have been motivated by a desire to cut production costs. The Office Action takes lines 20-24 out of context and reaches an incorrect conclusion. The paragraph from lines 9-24 states:

First, the wallboard composition of the present invention enables a significant reduction of the amount of calcined gypsum required to produce the wallboard. This reduction in the amount of calcined gypsum stucco (through the use of perlite in the wallboard composition) in the method of the present invention expands the production capabilities of current wallboard manufacturing plants. Typically, the gypsum plants are limited in capacity production due to grinding of the gypsum ore or in calcination of the synthetic gypsum. Stretching the amount of gypsum required while reducing the energy and overall cost required greatly enhances the manufacturing production capabilities of the modified wallboard manufacturing facility of the instant invention.

Thus, Luongo teaches that reducing the amount of gypsum (through the use of perlite in the wallboard composition) lowers production costs. Luongo also teaches that grinding gypsum ore is disadvantageous, limits capacity, and increased production costs. To the extent that the cited passage states anything about grinding and cost reduction, it teaches away from grinding. According to Luongo, grinding is part of the problem, not part of the solution. One of ordinary skill in the art at the time applicants' invention was made would have been motivated to add perlite to the gypsum, and would have been dissuaded from grinding gypsum ore. Thus, Luongo teaches away from grinding gypsum ore and says nothing at all about fabricating duct board. To the extent that Luongo can be considered to say anything about grinding, Luongo teaches away from the invention.

The Examiner's argument that Applicant's invention lowers costs and therefore, "would have been obvious motivated by the desire to cut production costs," attempts to compensate for a lack of any teaching, motivation or suggestion of applicant's claimed combination in the prior art. Taking this argument to its logical conclusion, the only inventions that would be patentable are those that increase production costs. A prospective cost reduction cannot provide the motivation to modify the teachings of the prior art where, as here, the prior art taught that a feature (grinding) later included in applicant's claimed combination would have increased costs, and in any event is applied to a totally different process (gypsum ore extraction) than claimed by applicant.

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The argument in the office action fails, because Luongo fails to suggest, "machining the molded shiplap edge," as required by claim 1, and thus fails to suggest any reduction in production cost from that feature. At most, Luongo only suggests that there is a way to cut production costs, but the solution proposed by Luongo has nothing to do with grinding generally, or with applicant's claimed invention in particular. Absent some teaching in the prior art that the specific features claimed by applicant would reduce production costs, a mere general desire to reduce costs fails to state a prima facie case of obviousness.

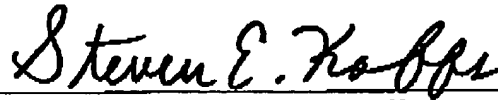
Further, one of ordinary skill in the art would not have looked to the teachings of Luongo to modify the teachings of Qi in any event. Qi is directed to a duct board material made of fiber glass. Luongo is directed to a wallboard product made of gypsum and perlite, with a paper covering. These materials have very different characteristics and applications, and one of ordinary skill in the art at the time applicant's invention was made would not have been motivated to look to the teachings of Luongo to modify the duct board of Qi. Therefore, a prima facie case of obviousness has not been established.

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Assistant Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account 04-1679.

Respectfully submitted,

Dated: 10-19-05



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